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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/994,675	11/28/2001	Shin Fujita	110954	8457

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EXAMINER

NGUYEN, TRUNG Q

ART UNIT PAPER NUMBER

2829

DATE MAILED: 05/22/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/994,675

Applicant(s)

FUJITA, SHIN

Examiner

Trung Q Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 May 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Election/Restrictions*

1. Applicant's election without traverse of species Figure 3 in Paper No. 8 is acknowledged. Upon review, the subject matter of all species is sufficiently related, therefore, the restriction will be withdrawn and a new office action is attached herein.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-16 are rejected under 35 U.S.C. 102(e) as being anticipated by Sumi et al. (U.S. 6,169,532).

As to claims 1-2 and 8, Sumi et al. disclose in Figures 1-2 and 13, an electro-optical device 11 of Fig. 2 using a test circuit <sup>24</sup>~~42~~ which operates in response to an action command signal periodically changing a level thereof (see Fig. 1), the electro-optical device 11 of Fig. 2 including a pixel electrode 61 of Fig. 13 which is arranged at an intersection of each of scanning lines 17 of Fig. 1 and each of data lines via lines that connect 13 and 11 together, and serves as one electrode of a capacitor 11P, and a pixel switching element 11Q connected between the pixel electrode and the data line (see Fig. 1); pixel electro supplying the pixel electrode with a data signal by turning on the pixel switching element; When the switch element 11Q ON, it will connecting the pixel electrode 61 of Fig. 13 and

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the data line 17 of Fig. 1 at a timing delayed from a timing of a level change 42 of the action command signal via control circuit 14 in the course of outputting a voltage supplied to the pixel electrode to a reading signal line by using the test circuit 24; and determining whether the voltage output to the reading signal-line corresponds to a voltage responsive to the data signal supplied to the pixel electrode (column 5, 10-40).

As to claim 2, Sumi et al. disclose in Figure 1 a test switching element 23 connected between the data line 17 and the reading signal-line 32; and a control circuit 14, which operates in response to an action command signal periodically changing a level thereof, and which turns on the test switching element at a timing delayed from a timing of a level change of the action command signal (column 5, lines 7-15).

As to claims 3 and 9, Sumi et al. disclose in Figure 1 the control circuit 14 turning on the test switching element 23 at a timing delayed from the timing of the level 24 change of the action command signal by a duration of time falling within a range from one-eighth to one-quarter the period of the action command signal (column 5, lines 10-30).

As to claims 4 and 10, Sumi et al. disclose in Figure 1 an input terminal (Svd) of that inputs the action command signal to the control circuit 14 and an output terminal (Sdo) of the reading signal-line, the input and output terminals being arranged on opposed ends of the control circuit (column 3, lines 23-36).

As to claims 5 and 13, Sumi et al. disclose in Figure 1 the control circuit 14 including an output device (Sdo and IMG) that outputs a control signal that changes the level thereof in response

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to the action command signal, and a timing modification device that delays a timing of a level change of the control signal from the timing of the level change of the action command signal (column 5, lines 7-40).

As to claims 6 and 14, Sumi et al. disclose in Figures 9 and 13, the timing modification device being a delay device (Fig. 9 or device 61 of Fig. 3) .

As to claims 7 and 15-16, Sumi et al. disclose in Figures 1-2 and 13, an electro-optical device 11 of Fig. 2 using a test circuit 42 which operates in response to an action command signal periodically changing a level thereof (see Fig. 1), the electro-optical device 11 of Fig. 2 including a pixel electrode 61 of Fig. 13 which is arranged at an intersection of each of scanning lines 17 of Fig. 1 and each of data lines via lines that connect 13 and 11 together, and serves as one electrode of a capacitor 11P, and a pixel switching element 11Q connected between the pixel electrode and the data line (see Fig. 1); pixel electro supplying the pixel electrode with a data signal by turning on the pixel switching element; When the switch element 11Q ON, it will connecting the pixel electrode 61 of Fig. 13 and the data line 17 of Fig. 1 at a timing delayed from a timing of a level change 42 of the action command signal via control circuit 14 in the course of outputting a voltage supplied to the pixel electrode to a reading signal line by using the test circuit 24; and determining whether the voltage output to the reading signal-line corresponds to a voltage responsive to the data signal supplied to the pixel electrode (column 5, 10-40); in addition, a control circuit 14, switching elements 23, an input terminal (Svd) of that inputs the action command signal to the control circuit 14 and out put terminal (Sdo) that arranged at an end of the control circuit opposite to the input terminal, that outputs a voltage of the reading signal-line 11R of Fig. 1.

As to claim 11, Sumi et al. disclose in Figure 13 the capacitor 61 of Fig. 13 being formed of the pixel electrode serving as one electrode, a counter electrode serving as the other electrode, and an electro-optical material sandwiched between the one electrode and the other electrode (column 14, lines 60-67).

As to claim 12, Sumi et al. disclose in Figure 1, 13 and column 14, lines 60-67) a storage capacitor having one electrode thereof connected to the pixel electrode and the other electrode thereof connected to a capacitive line (connection between 11A, 11P and 11R with respect to reference number 61 of Fig. 13).

### ***Conclusion***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. As already mentioned, there are a number of prior art references dealing with the use of electro-optical device; only a representative sample is cited herein.


*Murade (U.S. 6,483,493)* discloses an electro-optical apparatus and electronic device.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Trung Nguyen whose telephone number is 703-305-4925. The examiner can normally be reached on Monday through Friday, 8:30AM – 5:00PM. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-5841. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cuneo Kammie can be reached at (703) 308-1233.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)-308-0956.

*Trung Nguyen*  
Patent Examiner  
Group Art Unit 2829  
March 19, 2003

  
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